

REMARKS

Claims 8 and 23 have been amended. No new matter has been added. Support for the amended claims may be found, for example, in paragraph [0010].

Claims 23-25 have been rejected under 35 USC 102(b) as anticipated by Way; Claims 8-11, 14 and 18 have been rejected under 35 USC 103(a) as unpatentable over Way in view of Napier; Claims 12-13 have been rejected under 35 USC 103(a) as unpatentable over Way in view of Napier, further in view of Gabl; and Claim 26 has been rejected under 35 USC 103(a) as unpatentable over Way in view of Gabl; and Claim 27 Claim 26 has been rejected under 35 USC 103(a) as unpatentable over Way in view of Onaka. The rejections are respectfully traversed for the reasons presented herein-below.

The Examiner states on page 4, with reference to Fig. 10 and paragraphs [0054] and [0077] that Way teaches a receiver for angle-modulated optical signals. Applicants respectfully disagree. According to paragraph [0081], the apparatus of Fig. 10 shows a transmitter (see also Fig. 7, paragraph [0073]) with a notch filter 118. The notch filter comprises a circulator or special coupler 210 and a bandpass filter 218. Optical bandpass filter 218 separates the output into a transmitted signal and a reflected signal. The transmitted signal contains the optical carrier. The reflected signal includes a plurality of interleaved single sideband signals reflected from the optical bandpass filter 218 to third port 216. This is also specified in FIG. 10 at port 216 optical single-sideband signals with optical carrier suppressed. According to paragraph [0073], the notch filter 118 is a bandreject filter, which is selected to eliminate the carrier **without interfering** with the signals of the channels. Therefore, the optical filter 218, which may be based on a Fabry-Perot cavity (FPR), only has features of a filter and cannot be used as a part of a demodulator.

According paragraph [0081], at point 228 (of the transmitter) the output signal includes the (reflected) interleaved single sideband signals and the modulated optical carrier. Hence, the notch filter 118 is used to combine a modulated carrier with the single sideband signals. In other words: A transmission signal, which can be demodulated, because it comprises a carrier. This combined signal, not the reflected signals, is passed according to Way from the transmitter to an opto-electrical transducer at the receiver. The opto-electrical transducer in Way only converts the optical signal into an electrical signal. The demodulation is done by the channel detectors 238 (paragraph [0083]).

Accordingly, Way fails to disclose an optical resonator designed as a demodulator for an angle modulated signal. That is, Way does not teach the use of an optical resonator, e.g. FPR, as a demodulator for angle modulated optical signals.

Additionally, the Examiner admits that Way does not teach an optical resonator with a half bit storage time, and cites Napier as disclosing this feature. The timing of two data streams is controlled by a common clock (column 4, line 4) and the time difference between these signals is achieved by data paths having different lengths (column 5, lines 612). In addition, a time delay or transmission time caused by the path (fiber) cannot be compared with a storage time as required in the claimed invention. The storage time describes the duration for keeping the energy in the optical resonator and not a transition time.

Moreover, in Response to Arguments, presented in paragraph 10 of the Office Action, the Examiner remarks that recitation of an intended use must result in a structural difference between the claimed invention and prior art in order to patentably distinguish the claimed invention over the prior art. Here, the Examiner points to the transmitter 104 in Fig. 10 and all other parts as receiving the signal while still meeting the claim limitations. Applicants respectfully disagree.

Even if the prior art device performs all the functions recited in the claim, the prior art cannot anticipate the claim if there is any structural difference. It should be noted, however, that means plus function limitations are met by structures which are equivalent to the corresponding structures recited in the specification. *In re Ruskin*, 347 F.2d 843, 146 USPQ 211 (CCPA 1965) as implicitly modified by *In re Donaldson*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994). See also *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999).

The claimed invention requires an optical receiver, as opposed to a notch filter, with an opto-electrical converter receiving the reflected signal and outputting a demodulated signal. Clearly the devices ability to convert and output a demodulated signal requires "structural" differences in the device. Additionally, different signals are input to the notch filter of Way and to the optical resonator of the instant application, and different signals are output as a result. Moreover, in Way, the receiver converts a transmission signal containing the carrier and the single sideband signals into an electrical signal and then feeds this signal to a plurality of signal detectors for demodulation. In the claimed invention, on the other hand, there is an opto-electrical converter connected to the coupling out device / circulator for receiving and

demodulating the reflected signal. An opto-electrical converter connected to the port 126 of the circulator in Way (Fig. 10) would not lead to any result at all.

In view of the above, Applicants submit that this application is in condition for allowance. An indication of the same is solicited. The Commissioner is hereby authorized to charge deposit account 02-1818 for any fees which are due and owing, referencing Attorney Docket No. 119010-114.

Respectfully submitted,

BELL, BOYD & DLOYD LLP

BY 

Kevin R. Spivak

Reg. No. 43,146

Customer No. 29177

Dated: June 2, 2008